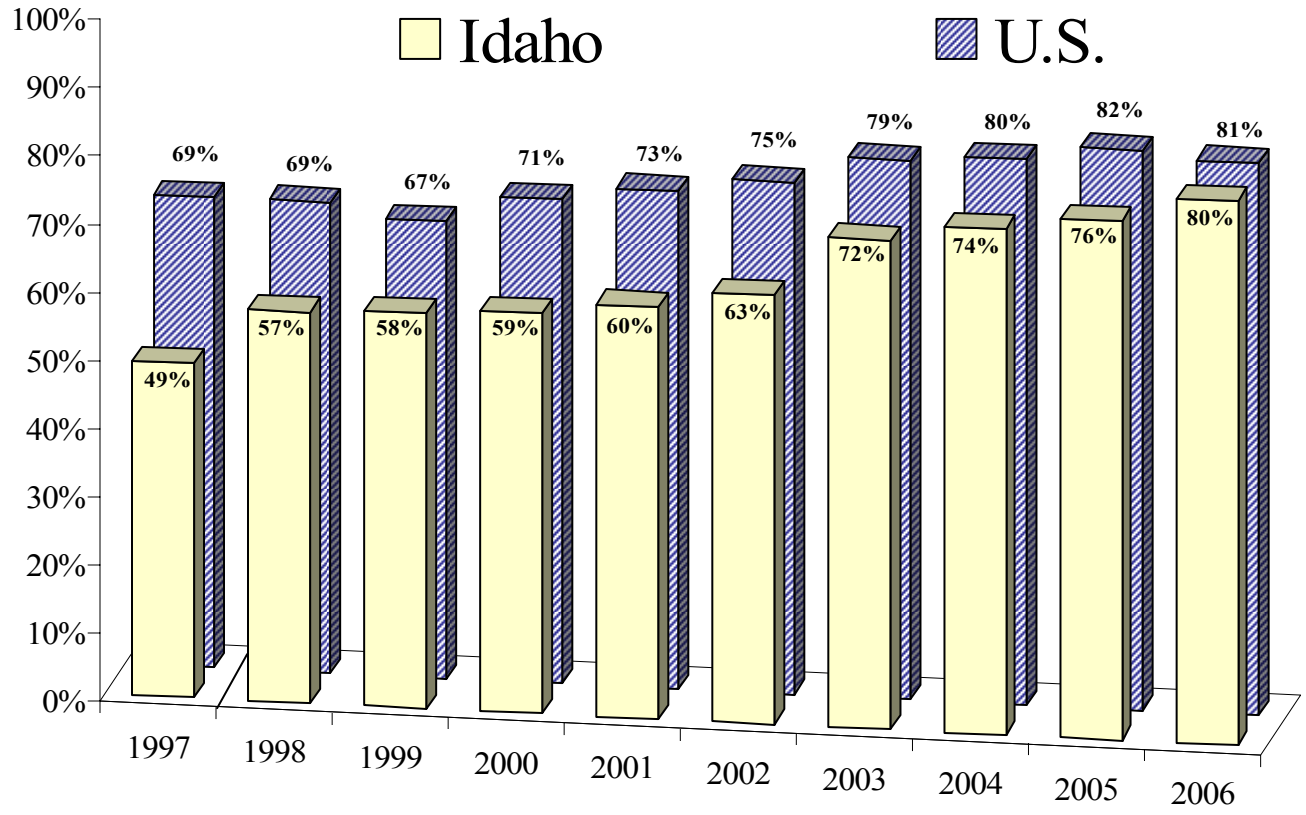
Safety Restraint Usage

Idaho's seat belt use law, effective July 1, 1986, requires seat belt use for front seat passengers and drivers, regardless of residency, in vehicles with a gross vehicle weight of 8,000 pounds or less that were manufactured with safety belts. The law is a "secondary" law and can only be enforced when someone is stopped for another traffic violation. The law was updated July 1, 2003. It now covers all seating positions and has enhanced penalties for drivers less than 18 years of age. Drivers and occupants, 18 years of age and older, receive separate tickets.

Figure 13 depicts observed seat belt use by year for both Idaho and the U.S. The figures are the observed rates for persons in passenger cars, pickups, sport utility vehicles, and vans, which make up 94% of the vehicles involved in motor vehicle crashes. The U.S. usage rate comes from the National Occupant Protection Use Survey (NOPUS) and the mini NOPUS, which are done alternately every year.

Figure 13
Observed Seat Belt Usage – Idaho vs. U.S.: 1997 - 2006



The methodology for the observational seat belt survey was changed in 1998 in accordance with the National Highway Traffic Safety Administration (NHTSA) guidelines. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology. Likewise, the methodology for the national survey differs from that of Idaho and does not include any observation sites in Idaho.

Observational Seat Belt Survey Results

Table 26 shows the observed shoulder harness seat belt use by county.

Table 26
Observed Seat Belt Use by County: 2002-2006

	2002	2003	2004	2005	2006	Change 2005-2006	Avg. Change 2002-2005
Ada	64.3%	81.0%	85.3%	89.9%	93.0%	3.4%	12.2%
Bannock	58.5%	55.7%	61.2%	58.7%	66.9%	14.0%	0.3%
Bingham	45.2%	47.4%	45.2%	48.7%	53.9%	10.6%	2.7%
Blaine	60.0%	68.7%	68.6%	66.9%	66.6%	-0.5%	3.9%
Bonner	70.9%	74.4%	75.3%	73.0%	82.5%	13.0%	1.0%
Bonneville	62.5%	59.4%	72.4%	70.7%	66.3%	-6.2%	4.8%
Canyon	63.2%	75.1%	77.9%	79.2%	80.5%	1.6%	8.1%
Cassia	49.6%	53.9%	41.8%	66.9%	58.9%	-11.9%	15.4%
Elmore	52.9%	67.9%	70.2%	68.3%	70.8%	3.6%	9.7%
Kootenai	70.2%	78.6%	76.8%	78.5%	89.0%	13.4%	4.0%
Latah	74.0%	74.2%	71.9%	78.6%	79.4%	1.0%	2.1%
Madison	52.4%	58.8%	58.0%	62.2%	65.3%	5.0%	6.1%
Minidoka	48.5%	55.6%	54.2%	75.3%	70.4%	-6.4%	17.0%
Nez Perce	65.4%	74.4%	77.6%	82.5%	85.1%	3.1%	8.1%
Payette	61.2%	71.9%	76.1%	75.4%	86.9%	15.3%	7.4%
Twin Falls	58.9%	63.0%	73.2%	74.5%	68.4%	-8.2%	8.3%
Statewide	**62.9%**	**71.7%**	**74.0%**	**76.0%**	**79.8%**	**5.0%**	**6.7%**

The Office of Highway Operations and Safety evaluates compliance rates through analysis of collision data and statewide observational surveys of seat belt use. Observational surveys are conducted by observing shoulder harness use or non-use. The observational survey is a representative sample of the state and does not include all counties.

Table 27 shows the observed seat belt use for the Idaho Transportation Department (ITD) districts[4] by vehicle type. District 3 (south-western Idaho) had the highest overall usage at 88.5%, while district 5 (south-eastern Idaho) had the overall lowest usage at 63.3%.

Table 27
Idaho Safety Belt Observation Survey: 2006 – Usage by Vehicle Type

ITD District	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
1	89.0%	89.3%	80.8%	86.8%
2	88.2%	86.6%	72.6%	83.1%
3	90.2%	92.1%	81.6%	88.5%
4	75.8%	74.2%	48.5%	66.7%
5	65.2%	69.4%	51.8%	63.3%
6	73.6%	71.2%	47.3%	65.9%
Statewide	**83.3%**	**84.2%**	**69.3%**	**79.8%**

Usage rates for the occupants of pickup trucks continue to be significantly lower than usage rates for other types of passenger vehicles. The usage rate for pickup truck occupants in 2006 ranged from a high of 81.6% in District 3 (south-western Idaho) to a low of 47.3% in District 6 (eastern Idaho).

Seat belt usage varied by the type of roadway the vehicles were traveling on. It ranged from a high of 97.6% on urban interstates to a low of 32.4% on rural minor collectors.

There was no statistically significant difference between urban and rural sites. Usage on urban roadways was 81.2%, while usage on rural roadways was 76.0%. There was also no statistically significant difference between major and minor roadways. Usage on major roadways was 80.8% while usage on minor roadways was 79.2%. Major roads were defined as interstates and principal arterials. Minor roads were comprised of the rest of the roadway functional classifications.

Self-Reported Seat Belt Usage Results

Table 28 shows the self-reported seat belt use for people, ages 7 and older (ages 4 and older prior to 2005), in passenger cars, pickups, sport utility vehicles, and vans that were killed or seriously injured. The child passenger safety seat law was upgraded in 2005 to include children age 6 and younger. Research has indicated there is a tendency for persons involved in collisions to falsely report compliance with the seat belt law and thus, self-reported use tends to overstate actual use[5]. Seat belt use by severely or fatally injured occupants can be more directly assessed by law enforcement officers or emergency medical personnel, and is therefore, more reliable.

Table 28
Self-Reported Seat Belt Use : 2002-2006
Age 7 and older in Passenger Cars, Pickups, Sport Utility Vehicles, and Vans

Injury Type	2002	2003	2004	2005	2006	Change 2005-2006	Avg. Change 2002-2005
Fatalities -Restraints Used	37.5%	37.2%	42.4%	40.0%	38.8%	-3.0%	2.5%
Serious Injuries -Restraint Used	57.6%	58.4%	64.7%	64.7%	67.6%	4.5%	4.1%

Of the 206 passenger motor vehicle occupants killed in 2006, only 80 were using seat belts. The National Highway Traffic Safety Administration estimates seat belts are 50% effective in preventing fatalities and serious injuries. By this estimate, we can deduce that 80 lives were saved in 2006 by seat belt usage. An additional 58 lives could have been saved if everyone had buckled up.

Costs of Injuries by Safety Restraint Use

Table 29
2006 Costs of Injuries
Persons Using Safety Restraints versus Persons Not Using Safety Restraints (Age 7 & Older)

	Safety Restraints			Costs of Injuries		
Injury Type	Used	Not Used	Unknown	Used	Not Used	Unknown
Fatality	80	116	10	$276,960,651	$401,592,944	$34,620,081
Serious Injury	916	384	56	$219,544,578	$92,036,155	$13,421,939
Visible Injury	2,706	685	105	$129,713,456	$32,835,816	$5,033,227
Possible Injury	6,159	656	233	$155,818,329	$16,596,334	$5,894,735
Total				**$782,037,013**	**$543,061,249**	**$58,969,982**

Self-reported seat belt use is biased because of the penalties involved for not wearing a seat belt (meaning people misrepresent their belt use to avoid a ticket). While 81% of the motor vehicle occupants in crashes said they were wearing seat belts, the observational surveys show only 80% wearing seat belts. The numbers of people using seat belts are higher for the less severe injury categories because of this bias, but also because seat belts lessen the severity of injuries sustained in crashes. Had the occupants that were seriously injured and belted not been wearing a seat belt, they may have been killed.

Local Safety Restraint Usage

Table 30 presents self-reported restraint use rates for all motor vehicle occupants, 7 years old and older, involved in fatal and serious injury collisions for each county, comparing 2002 through 2006. Collision data provides an analysis of the restraint use at the local level. This information is self-reported to the investigating officer after a collision. The self-reported use is for all occupants, regardless of injury type, involved in fatal and serious injury crashes.

Table 30
Self-Reported Restraint Use in Fatal and Serious Injury Crashes by County: 2002-2006
in Passenger Cars, Pickups, Sport Utility Vehicles, and Vans

County by Population	2002	2003	2004	2005	2006	Change 2005-2006	Avg. Change 2002-2005
50,000 and over							
Ada	77.0%	75.5%	83.2%	85.0%	84.8%	-0.2%	3.5%
Bannock	55.6%	72.1%	66.7%	73.5%	64.8%	-11.9%	10.8%
Bonneville	63.8%	68.5%	73.9%	63.2%	68.5%	8.5%	0.3%
Canyon	62.2%	69.5%	73.5%	79.1%	79.7%	0.7%	8.4%
Kootenai	77.9%	82.8%	80.4%	79.4%	74.3%	-6.4%	0.7%
Twin Falls	81.0%	61.6%	73.1%	82.6%	83.0%	0.5%	2.6%
20,000 - 49,999							
Bingham	55.1%	61.0%	61.2%	58.0%	58.5%	0.8%	2.0%
Blaine	48.7%	60.5%	60.7%	55.3%	76.5%	38.4%	5.2%
Bonner	62.6%	80.7%	64.8%	73.0%	63.3%	-13.2%	7.3%
Cassia	51.0%	37.7%	71.1%	65.6%	50.7%	-22.8%	18.3%
Elmore	66.7%	57.4%	65.4%	69.8%	69.9%	0.2%	2.2%
Latah	65.2%	69.8%	59.2%	84.1%	63.5%	-24.5%	11.3%
Madison	65.6%	62.5%	44.0%	48.0%	58.6%	22.1%	-8.4%
Nez Perce	80.7%	68.0%	83.1%	73.8%	83.5%	13.2%	-1.6%
Payette	58.2%	67.4%	74.5%	79.0%	80.4%	1.8%	10.8%
10,000 - 19,999							
Boundary	73.9%	50.0%	85.7%	58.3%	75.8%	29.9%	2.4%
Franklin	23.3%	56.3%	47.8%	31.8%	66.7%	109.5%	30.9%
Fremont	57.6%	55.9%	73.0%	43.8%	66.7%	52.4%	-4.1%
Gem	58.3%	71.4%	72.7%	60.0%	61.5%	2.6%	2.3%
Gooding	55.8%	51.0%	55.9%	52.5%	43.5%	-17.2%	-1.7%
Idaho	63.4%	43.8%	53.2%	75.0%	71.4%	-4.8%	10.5%
Jefferson	57.1%	59.1%	56.8%	72.0%	46.2%	-35.9%	8.8%
Jerome	55.5%	66.7%	73.6%	63.1%	57.9%	-8.3%	5.4%
Minidoka	48.3%	62.5%	66.2%	67.5%	64.7%	-4.1%	12.4%
Owyhee	46.3%	23.5%	53.1%	32.6%	64.5%	97.9%	12.7%
Shoshone	59.1%	47.4%	76.5%	14.8%	73.3%	395.1%	-13.0%

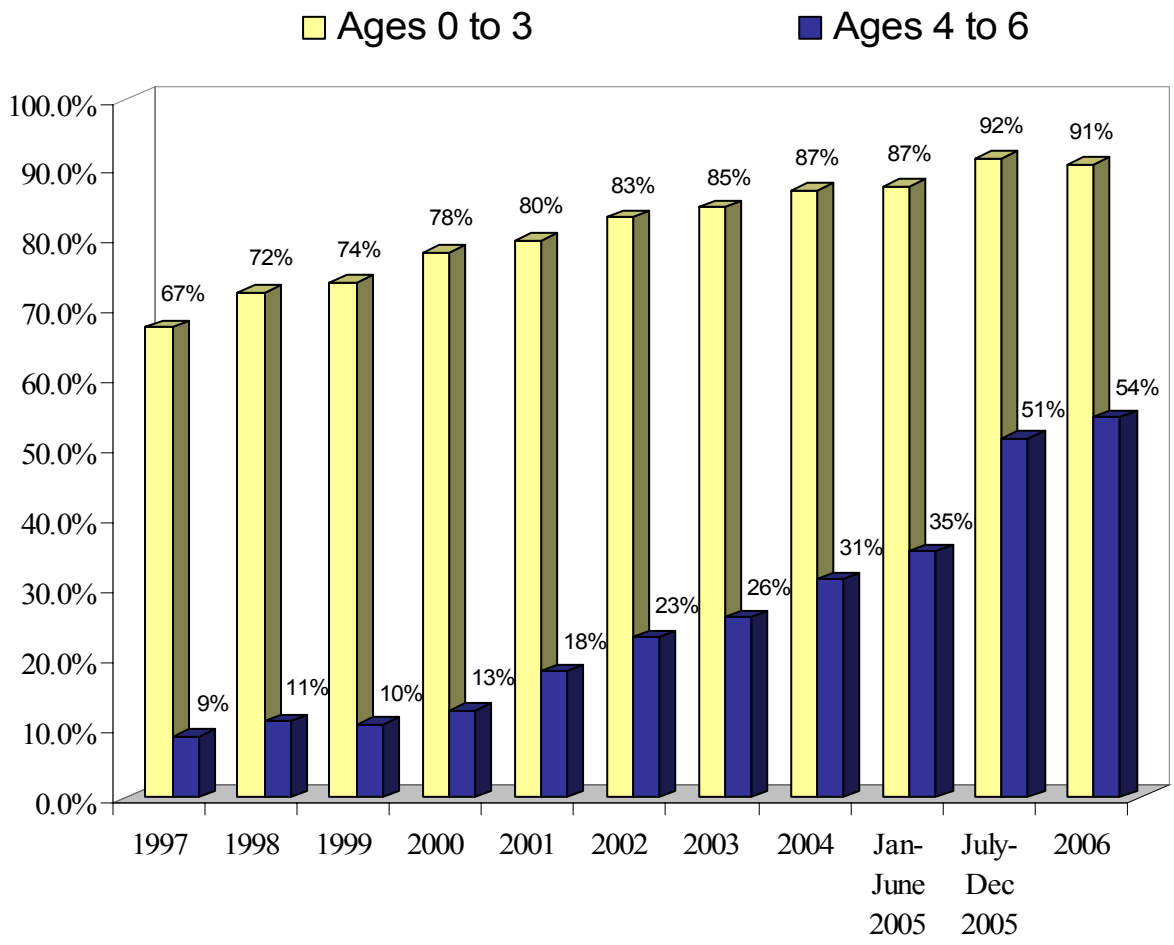
Table 30 (Continued)
Self-Reported Restraint Use in Fatal and Serious Injury Crashes by County: 2002-2006
in Passenger Cars, Pickups, Sport Utility Vehicles, and Vans

County by Population	2002	2003	2004	2005	2006	Change 2005-2006	Avg. Change 2002-2005
5,000 - 9,999							
Bear Lake	66.7%	29.4%	72.7%	75.0%	50.0%	-33.3%	31.5%
Benewah	43.2%	60.0%	63.2%	63.6%	63.2%	-0.8%	15.0%
Boise	64.0%	64.1%	61.4%	59.1%	75.0%	26.9%	-2.6%
Caribou	47.5%	21.4%	50.0%	46.7%	92.9%	99.0%	23.9%
Clearwater	81.8%	44.4%	78.6%	66.7%	42.3%	-36.5%	5.3%
Lemhi	60.5%	53.3%	83.3%	50.0%	59.3%	18.5%	1.5%
Power	48.0%	65.0%	56.3%	52.6%	46.2%	-12.3%	5.2%
Teton	45.5%	81.8%	0.0%	28.6%	58.3%	100.0%	#DIV/0!
Valley	71.4%	62.9%	60.0%	45.8%	48.2%	5.1%	-13.4%
Washington	71.4%	96.2%	33.3%	73.3%	100.0%	36.4%	29.8%
0 - 4,999							
Adams	92.3%	58.3%	40.0%	31.3%	100.0%	220.0%	-30.0%
Butte	88.9%	71.4%	50.0%	44.4%	50.0%	12.5%	-20.3%
Camas	100.0%	50.0%	20.0%	50.0%	66.7%	33.3%	13.3%
Clark	36.4%	60.0%	100.0%	61.5%	40.0%	-35.0%	31.1%
Custer	45.0%	37.5%	52.6%	76.5%	90.0%	17.7%	23.0%
Lewis	90.0%	57.1%	62.5%	76.2%	0.0%	-100.0%	-1.7%
Lincoln	42.1%	36.4%	90.9%	54.6%	52.2%	-4.4%	32.1%
Oneida	45.5%	64.0%	55.2%	40.0%	58.3%	45.8%	-0.2%
Statewide Average	**65.7%**	**67.6%**	**72.1%**	**72.2%**	**73.5%**	**1.8%**	**3.2%**

Child Safety Seat Usage by Age Groups

The child safety seat law was upgraded in 2005 to include all children under the age of 7 years old. The law took effect July 1, 2005. Prior to that, Idaho Code required every child, under the age of four, and weighing less than 40 pounds be restrained in a car safety seat that meets the federal standards when traveling in a non-commercial motor vehicle manufactured with seat belts after January 1, 1966.

Figure 14
Child Safety Seat Usage in Crashes by Age Group: 1997 - 2006



The change in the child safety seat law increased usage among the 4 to 6 year old age group by 16 percentage points in the last half of 2005. Increased publicity of the law change also seemed to have an effect on the 0 to 3 year old age group, increasing child safety seat usage by 5 percentage points.

Child Safety Seat – Self-Reported Usage

Table 31 shows self-reported child safety seat use for children in passenger cars, pickups, sport utility vehicles, and vans from 2002 to 2006. The higher numbers of children and lower percentage usage in 2005 is due to changing the criteria for examining child safety seat use to include children ages 4 through 6 years old.

Table 31
Self-Reported Child Safety Seat Use by Injury Type: 2002-2006
Under Age 4 (through 2004) and Under Age 7 (2005 and after)
in Passenger Cars, Pickups, Sport Utility Vehicles, and Vans

Injury Type	2002	2003	2004	2005	2006	Change 2005-2006	Avg. Change 2002-2005
Fatalities							
Restrained	1	3	6	5	3	-40.0%	94.4%
Unrestrained	3	2	1	0	0	0.0%	-61.1%
Serious Injuries							
Restrained	9	13	3	17	7	-58.8%	144.7%
Unrestrained	7	3	5	19	12	-36.8%	96.5%
Visible Injuries							
Restrained	37	30	39	51	63	23.5%	14.0%
Unrestrained	22	19	12	39	45	15.4%	58.2%
Possible Injuries							
Restrained	139	162	182	204	217	6.4%	13.7%
Unrestrained	36	49	30	122	71	-41.8%	101.3%
No Injuries							
Restrained	1,620	1,777	1,889	2,449	2,175	-11.2%	15.2%
Unrestrained	301	283	259	932	627	-32.7%	81.8%
Total Restrained	1,654	1,843	2,119	2,727	2,466	-9.6%	18.4%
Total Unrestrained	280	296	319	1,119	771	-31.1%	88.1%
% of Children Restrained	85.5%	86.2%	86.9%	70.9%	76.2%	7.4%	-5.6%

The National Highway Traffic Safety Administration estimates child safety seats are 69% effective in preventing fatalities and serious injuries. By this estimate we can deduce that a child safety seats saved 4 lives in 2005. Additionally, 10 serious injuries were prevented and 8 of the 12 unrestrained serious injuries may have been prevented if they had all been properly restrained.